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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,033	03/04/2005	Barbara Albrecht	Lc A 35 823	3049

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EXAMINER	
TRUONG, TAMTHOM NGO	
ART UNIT	**PAPER NUMBER**
1624	

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/501,033	ALBRECHT ET AL.	
	Examiner	Art Unit	
	Tamthom N. Truong	1624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 5-16* is/are pending in the application.

4a) Of the above claim(s) *13-16* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 5-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

NON-FINAL ACTION

Applicant's amendment of 6-28-06 has been fully considered. The amended definition of "X" has overcome the previous rejection of 112/2nd paragraph (item (a)). However, the amended claim 6 and the argument have not overcome the previous rejections of 112/1st and 2nd paragraphs (items (b) and (c)). Thus, said rejections are maintained herein.

Claim 4 has been cancelled.

Claims 9-16 have been added.

1. **Election by original presentation:** Newly submitted claims 13-16 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Claims 13-16 are drawn to a method of treating acute myocardial infarction using a compound of formula I **in combination with one or more medicaments**. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 13-16 are withdrawn from consideration as being **directed to a non-elected invention**. See 37 CFR 1.142(b) and MPEP § 821.03.

Therefore, only claims 1-3 and 5-12 are considered herein.

Claim Rejections - 35 USC § 112, Second Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-3 and 5-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Despite applicant's explanation, it is maintained that the limitation of "*solvate*" has indefinite metes and bounds since the type of solvents and its proportion is not mentioned in the specification.

b. Although claim 6 has been amended to recite a "pharmaceutical" composition, the limitation of "*at least one further active compound*" still does not set proper metes and bounds for the claim because it is unclear what the other active compound is, or how many compounds are in said composition. Furthermore, said limitation is open-ended and does not exclude compounds that are not listed in the specification.

Claim Rejections - 35 USC § 112, First Paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. **Written Description:** Claim 6 remains rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter

which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Despite applicant's argument, the amended claim 6 still does not have written description because the specification fails to teach which active compounds could be combined, and at what dosage. It also fails to teach the type of formulations for such a combination, and modes of administration. Thus, it is maintained that the pharmaceutical composition in claim 6 does not have adequate written description.

3. **Scope of Enablement** (for solvates): Claims 1-3, and 5-12 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for making salts of the claimed compounds, does not reasonably provide enablement for making "*solvates*" of the claimed compounds or their salts. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

The following factors have been considered in the determination of an enabling disclosure:

(1) The breadth of the claims;

(2) The amount of direction or guidance presented;

(3) The state of the prior art;

(4) The relative skill of those in the art;

(5) The predictability or unpredictability of the art;

(6) The quantity of experimentation necessary;

[See ***Ex parte Forman***, 230 USPQ 546 (Bd. Pat. App. & Int., 1986); also ***In re Wands***, 858 F. 2d 731, 8 USPQ 2d 1400 (Fed. Cir. 1988)].

The breadth of the claims: Claim 1 recites "solvates" of compounds represented by formula (I). The term "solvates" covers various forms of the same compound at different proportions of solvents. Thus, the scope of claim 1 and dependent thereon is unduly broad.

The amount of direction or guidance presented: Although the specification briefly defines what "solvates" are, it does not provide working examples to guide the skilled chemist to select a solvent to make a solvate. There is no guidance on what proportion of solvent to use for obtaining a "solvate". Thus, the specification fails to provide sufficient enablement for making "solvates" of the claimed compounds.

The state of the prior art: Although it is not unusual to expect a "solvate" of a compound, the process for selecting a particular solvent to make a solvate is not standard for all drugs. For the claimed compound, there is no reference teaching any possible solvate. Thus, the state of the prior art does not support the broad scope of claim 1.

The relative skill of those in the art: Even with the advanced training, the skilled clinician would have to engage in extensive research to select a particular "solvate" for each compound from the large Markush group of formula (I). Not only one has to determine an IC_{50} value, but also *in-vivo* activity to establish an LD_{50}, therapeutic index and active metabolites for each "solvate". Given a large Markush group of the three formulae, such a task would require a tremendous amount of effort, time and resource.

The predictability or unpredictability of the art & The quantity of experimentation necessary: The process of making a "solvate" is quite unpredictable because it is not possible to predict whether solid solutions will form and at what stoichiometry proportion (i.e, one, two, or half a molecule of solvent added per molecule of host).

Thus, with such a limited teaching from the specification and the art, the skilled chemist would have to engage in undue experimentation to make the hundreds of thousands of compounds covered by "solvates" of compounds represented by formula (I) in claim 1 and dependent thereon.

References cited on PTO-892

4. The references of **Golankiewicz et. al.** are cited to show state of the art. While they disclose a compound of substituted *(N-uracil)-2,4-dioxo-hexahydroquinazoline*, they fail to teach or fairly suggest an aromatic ring as a substituent corresponding to the instant R^2. Note, although the disclosed compound has *uracil* which is a heterocyclic ring, but not aromatic, and has 'oxo' groups as substituent, whereas the instant R^2 represents an aryl or heteroaryl group which is aromatic, and does not have an 'oxo' group as a substituent.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamthom N. Truong whose telephone number is 571-272-0676. The examiner can normally be reached on M, T and Th (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson can be reached on 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tamthom N. Truong
Examiner
Art Unit 1624

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10-20-06